

I CLAIM:

1. A light deflecting electric motor comprising:  
a stator assembly including a base, a fixed shaft fixed to  
the base and a stator mounted on the base;  
a rotor assembly including a rotating member rotatably  
mounted on a plurality of bearings further mounted on the fixed  
shaft, a polygon mirror mounted on the rotating member and a rotor  
mounted on the rotating member, the rotor assembly having a center  
of gravity located between the bearings; and  
a balancing plane provided in the vicinity of a plane which  
is generally perpendicular to a center of rotation of the rotor  
assembly and passes the center of gravity of the rotor assembly.
2. The motor according to claim 1, wherein each bearing  
comprises a ball bearing including a number of rolling members  
each made of ceramic.
3. The motor according to claim 1, wherein the rotor assembly  
has a balancing groove formed in a portion thereof located below  
the bearings.
4. The motor according to claim 2, wherein the rotor assembly  
has a balancing groove formed in a portion thereof located below  
the bearings.
5. The motor according to claim 3, wherein the rotor is  
generally annular and includes a rotor magnet radially opposed

to the stator with respect to the rotor and a rotor yoke provided on the rotating member to hold the rotor magnet, and the balancing groove is formed in the rotor yoke.

- 5           6. The motor according to claim 4, wherein the rotor is generally annular and includes a rotor magnet radially opposed to the stator with respect to the rotor and a rotor yoke provided on the rotating member to hold the rotor magnet, and the balancing groove is formed in the rotor yoke.

10

7. The motor according to claim 3, wherein the rotor is generally annular and includes a rotor magnet radially opposed to the stator with respect to the rotor and a rotor yoke provided on the rotating member to hold the rotor magnet, and the balancing  
15   groove is formed in the rotating member.

8. The motor according to claim 4, wherein the rotor is generally annular and includes a rotor magnet radially opposed to the stator with respect to the rotor and a rotor yoke provided  
20   on the rotating member to hold the rotor magnet, and the balancing groove is formed in the rotating member.

9. The motor according to claim 3, wherein the rotor is generally annular and includes a rotor magnet radially opposed  
25   to the stator with respect to the rotor and a rotor yoke provided on the rotating member to hold the rotor magnet, and the balancing groove is defined between the rotating member and the rotor yoke.

10. The motor according to claim 4, wherein the rotor is generally annular and includes a rotor magnet radially opposed to the stator with respect to the rotor and a rotor yoke provided on the rotating member to hold the rotor magnet, and the balancing  
5 groove is defined between the rotating member and the rotor yoke.

11. The motor according to claim 3, wherein the polygon mirror is generally annular and has a reflecting surface, and the balancing groove is disposed inside the reflecting surface  
10 of the polygon mirror.

12. The motor according to claim 4, wherein the polygon mirror is generally annular and has a reflecting surface, and the balancing groove is disposed inside relative to the  
15 reflecting surface of the polygon mirror.

13. The motor according to claim 5, wherein the polygon mirror is generally annular and has a reflecting surface, and the balancing groove is disposed inside relative to the  
20 reflecting surface of the polygon mirror.

14. The motor according to claim 6, wherein the polygon mirror is generally annular and has a reflecting surface, and the balancing groove is disposed inside relative to the  
25 reflecting surface of the polygon mirror.

15. The motor according to claim 7, wherein the polygon mirror is generally annular and has a reflecting surface, and

the balancing groove is disposed inside relative to the reflecting surface of the polygon mirror.

16. The motor according to claim 8, wherein the polygon  
5 mirror is generally annular and has a reflecting surface, and the balancing groove is disposed inside relative to the reflecting surface of the polygon mirror.

17. The motor according to claim 9, wherein the polygon  
10 mirror is generally annular and has a reflecting surface, and the balancing groove is disposed inside relative to the reflecting surface of the polygon mirror.

18. The motor according to claim 10, wherein the polygon  
15 mirror is generally annular and has a reflecting surface, and the balancing groove is disposed inside relative to the reflecting surface of the polygon mirror.